Focus on…*Lake County's bridges*

Public attention focused on the condition and importance of our nation's bridges with the August 2007 collapse of the I-35W bridge in Minnesota. Monitoring the condition of bridges on Lake County highways is part of the System Preservation component of the 5-Year Program…"*to keep highways, bridges and bike paths in good condition.*" A federal bridge sufficiency rating over 80 is characteristic of a bridge in good condition—Section 2 provides information about how bridge sufficiency ratings are calculated. In 2006, the performance management system indicated that 80% of Lake County's bridges have a sufficiency rating of 80 or better. Federal bridge replacement funds were received from the Illinois Department of Transportation for the replacement of 4 bridges, the oldest constructed in 1937. Design work on these projects began in 2006. In addition to the traffic, structural and floodway aspects of the designs, context-sensitive solutions were applied to better fit the new bridges into the character of their surroundings. The last of the four bridges was constructed in 2007, raising the percentage of county bridges with a sufficiency rating of 80 or better to 92%. Total cost of the replacements was $8.9 million, with a county share of $1.7 million. Three of the new bridges are pictured below along with a totally new bridge at a new interchange.

Hunt Club Road at Mill Creek

Accommodating traffic flow during this bridge's 2006 construction was accomplished using temporary traffic signals and one way traffic. The old bridge, constructed in 1949, rested on approximately 20-foot long, untreated wood piles driven into the ground. The new bridge uses steel H-piles, the longest of which is 80 feet. Typically, newer bridges are much longer to accommodate flood flows: 77 feet on the new vs. 42 feet on the old bridge. This bridge, formerly 28 feet wide, is now 40 feet wide, accommodating two 12-foot traffic lanes with 8-foot shoulders on each side.

Millburn Road at Mill Creek

Context-sensitive design principles were employed to insert a new bridge into the historic Millburn area —the concrete was patterned and colored to achieve a red brick appearance similar to the brick posts and fencing in the historic cemetery just east of the structure. A bike path crossing added on the north side will eventually serve Millburn School to the east. North Mill Creek was returned to a more natural state of flow by reducing backwater at the bridge. This bridge replaces a structure built in 1945; its geometry and deck width were substandard for today's traffic.

Fairfield and Gilmer Road

This project received the Chicago Metro Chapter of the American Public Works Association's 2008 "Transportation Project of the Year" award in its class. The well-landscaped interchange replaces a 4-way stop at the top of a hill. 1,500 feet of retaining walls are hung from 312 concrete-filled drilled-shaft caissons, the deepest of which is 42 feet. Notable architectural features are the rubbed-finish Texas parapet railing and concrete brick-patterned retaining wall.

Kelsey Road at Flint Creek

This bridge over Flint Creek was awarded the Association of Consulting Engineering Companies' 2007 "Illinois Merit Award for Structural Systems." Its rustic appearance was achieved by incorporating specialty finish and color. Constructing the new bridge at a higher elevation than the bridge it replaced accommodates hikers on the new Lake County Grassy Lake Forest Preserve path along Flint Creek. The original 1937 setting of this bridge was an agricultural area; the forest preserve was dedicated in 2001.